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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,238	01/29/2001	Mitsuo Sacki	1080. 1090/JDH	6797

21171 7590 05/24/2002

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EXAMINER

STERRETT, JEFFREY L

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 05/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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12

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-40 is/are pending in the application.
Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-40 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

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- ~ 1. ~ Figures 1 and 2 should be designated by the legend --Prior Art-- because only what was old and known in the art at the time of the invention is illustrated (See MPEP § 608.02(g)).

Although Figures 1 and 2 may be felt to illustrate the inventive concept, they are so generic that they are more properly labeled "Prior Art".

- ~ 2. ~ The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Therefore, a display unit displaying that the synchronous switches are simultaneously turned on as recited by claims 2, 23, and 30 must be shown or the feature canceled from the claim. No new matter should be entered.

Rule 37 CFR 1.83(a) can be paraphrased as "if it is important enough to recite a specific limitation in the claims then the limitation should be specifically shown in the figures and if the limitation is not important enough to be specifically shown in the figures then the limitation is correspondingly not important enough to be specifically recited in the claims".

- ~~3.~~ The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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4. Claims 1, 3-22, 24-29, and 31-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen (US 6,069,471) in combination with Kuriyama et al (US 5,933,341).

Nguyen teaches a regulator circuit as recited by claims 1, 3-22, 24-29, and 31-40 except for utilizing a simultaneous switch conduction detection circuit. Kuriyama et al teaches as old and known in the power conversion art at the time of the invention that simultaneous switch conduction detection circuits were known expedients in power conversion circuitry where simultaneous switch conduction was a problem. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the regulator circuit of Nguyen by utilizing a simultaneous switch conduction detection circuit, such as taught by Kuriyama et al, in order to not only attempt to prevent simultaneous switch conduction but to also detect simultaneous switch conduction in a manner that was old and known in the art at the time of the invention.

5. Claims 2, 23, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nguyen in combination with Kuriyama et al as applied to claims 1, 22, and 29 above.

Nguyen and Kuriyama et al collectively teach a regulator circuit as recited by claims 2, 23, and 30 except for utilizing a display unit displaying that the main synchronous rectifying switches are simultaneously turned on. Official notice is taken that it was an old and known expedient in the art at the time of the invention to display operational conditions, such as when switches are simultaneously turned on, of power converters that would be of concern to users of the power

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converters. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the regulator circuit collectively taught by Nguyen and Kuriyama et al to include a display unit displaying that the main synchronous rectifying switches are simultaneously turned on since such was an old and known expedient in the art at the time of the invention.

~~6.~~ Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new grounds of rejection.

~~7.~~ The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Grosch (US 4,578,630), Schwartz (US 5,552,695), Schwartz et al (US 5,808,455), Carsten (US 5,929,692), and Grimm (US 5,955,872) are cited to show regulator circuits old and known in the art at the time of the invention.

~~8.~~ Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sterrett whose telephone number is (703) 308-1632. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 5:30 PM.

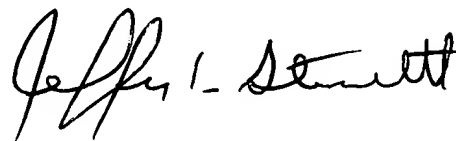
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Wong, can be reached on (703) 305-3477. The fax phone number for this Art Unit is (703) 305-7723 and the fax phone numbers for this Group are (703) 305-3431 or (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

jls

May 21, 2002

A handwritten signature in black ink, appearing to read "Jeffrey L. Sterrett". The signature is fluid and cursive, with the first name "Jeffrey" and last name "Sterrett" clearly distinguishable.

Jeffrey L. Sterrett

Primary Examiner

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